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Kathi Howard      4-13-06  
Kathi Howard                      Date

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.: 09/710,579  
Filed: November 10, 2000  
Patent No.: 6,978,015 b1  
Issued: December 20, 2005

Applicant(s): Mark Alan Erickson, Ioannis Kanellakopoulos, John Josef Hench, Sunil C. Shah, James W. Waite, Michail Tsatsanis, and Gurcan Aral

Title: METHOD AND APPARATUS FOR COOPERATIVE DIAGNOSIS OF IMPAIRMENTS AND MITIGATION OF DISTURBERS IN COMMUNICATION SYSTEMS

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Certificate**  
**APR 20 2006**  
**of Correction**

ATTN: DECISION AND CERTIFICATE OF CORRECTION  
BRANCH OF THE PATENT ISSUE DIVISION

**REQUEST FOR CERTIFICATE OF CORRECTION OF PATENT  
FOR PTO MISTAKE (37 CFR §1.322 (a)) AND  
APPLICANT'S MISTAKE (37 C.F.R. §1.323)**

Sir:

Attached in duplicate form, is Form PTO-1050, with at least one copy being suitable for printing. Many of the errors below are (or may be contended to be) the mistake of Applicant who states that the errors are of a minor nature or character and occurred in good faith, and correction thereof does not involve such changes in the patent as would constitute new matter or would require reexamination. Some of the errors which appear in the Form PTO-1050 were

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typographical errors which occurred through the fault of the U.S. Patent and Trademark Office (“PTO”).

The exact column and line number where the errors are shown in the patent are as follows:

Drawings, Sheet 4, FIG. 5, Box 507 reads “DISTURBED RECEIVER” and should read -- DISTURBER RECEIVER -- .

Drawings, Sheet 5, FIG. 6, Box 601 reads “DETECTION OF SERVICE TYPE EXISTANCE” and should read -- DETECTION OF SERVICE TYPE EXISTENCE -- .

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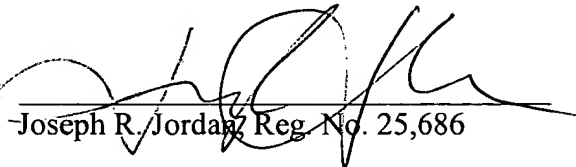
Joseph R. Jordan, Esq.  
Wood, Herron & Evans, L.L.P.  
2700 Carew Tower  
Cincinnati, Ohio 45202

As some of the errors are, or could be contended to be Applicant's mistakes, enclosed is a check for \$100.00 to cover the correction fee. If there is any further charge or credit due, please use Deposit Account No. 23-3000.

Respectfully submitted,

WOOD, HERRON & EVANS, L.L.P.

By:

  
Joseph R. Jordan, Reg. No. 25,686

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DATED : December 20, 2005

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MAILING ADDRESS OF SENDER:

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Page 2, OTHER PUBLICATIONS, Column 2, reads "Arthur Gelb et al., "The Analytic Sciences Corporation, Applied Optimal Estimation", 1974, pp 156-179." and should read – Arthur Gelb et al., The Analytic Sciences Corporation, "Applied Optimal Estimation", 1974, pp. 156-179. – .

Page 2, OTHER PUBLICATIONS, Column 2, reads "...Electrical Engineering and Computer Sciences, Low Power Receiver Design for Portable RF Applications: Design and Implementation of an Adaptive Multiuser Detector for an Indoor, Wideband CDMA Application, Fall 1998, pp 37, 43-52." and should read – ...Electrical Engineering and Computer Sciences, "Low Power Receiver Design for Portable RF Applications: Design and Implementation of an Adaptive Multiuser Detector for an Indoor, Wideband CDMA Application", Fall 1998, pp. 37, 43-52. – .

MAILING ADDRESS OF SENDER:

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PATENT NO. 6,978,015

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PAGE 3 of 7

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UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 6,978,015 <sup>B1</sup>

DATED : December 20, 2005

INVENTOR(S) : Mark Alan Erickson, Ioannis Kanellakopoulos, John Josef Hench, Sunil C. Shah,  
James W. Waite, Michail Tsatsanis, and Gurcan Aral

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Page 2, OTHER PUBLICATIONS, Column 2, reads "K. Sam Shanmugan et al., John Wiley & Sons, "Random Signals, Detection, Estimation and Data Analysis", pp 341-377." and should read – K. Sam Shanmugan et al., John Wiley & Sons, "Random Signals, Detection, Estimation and Data Analysis", 1988, pp. 341-377. – .

Page 2, OTHER PUBLICATIONS, Column 2, reads "Harry L. Van Trees, Massachusetts Institute of Technology, "Detection Estimation, and Modulation Theory", 1968, pp 19-163, 239-418." and should read – Harry L. Van Trees, Massachusetts Institute of Technology, "Detection, Estimation, and Modulation Theory", 1968, pp. 19-163, 239-418. – .

Page 3, OTHER PUBLICATIONS, Columns 1-2, read "Honig, M.L. et al., "Suppression of Near- and Far-End Crosstalk by Linear-Pre- and Post-Filerting", Selected areas in Communications, IEEE Journal on. Vol. 10 Issue 3, Apr. 1992, pp. 614-629, entire document." and should read – Honig, M.L. et al., "Suppression of Near- and Far-End Crosstalk by Linear Pre- and Post-Filtering", IEEE Journal on Selected Areas in Communications, Vol. 10, Issue 3, Apr. 1992, pp. 614-629, entire document. – .

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APR 21 2006

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 6,978,015 *B1*

DATED : December 20, 2005

INVENTOR(S) : Mark Alan Erickson, Ioannis Kanellakopoulos, John Josef Hench, Sunil C. Shah,  
James W. Waite, Michail Tsatsanis, and Gurcan Aral

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Page 3, OTHER PUBLICATIONS, Column 2, reads "Valenti, Craig F., Bellcore, "Cable Crosstalk Parameters and Models", ANSI Contribution IE1.4/97-302 Technical Subcommittee Working Group Members, Spectral Compatibility, Morristown, NJ 07960, USA, Sep. 22, 1997, pp.8." and should read – Valenti, Craig F., Bellcore, "Cable Crosstalk Parameters and Models", ANSI Contribution TIE 1.4/97-302 Technical Subcommittee Working Group Members, Spectral Compatibility, Morristown, NJ 07960, USA, Sep. 22, 1997, pp.8. – .

Column 10, line 14 reads "...network technologies other tha DSL (e.g., wireless net-..." and should read – ...network technologies other than DSL (e.g., wireless net-... – .

Column 13, line 5 reads "...this DEQ design is filter coefficients that a yield a filter..." and should read – ...this DEQ design is filter coefficients that yield a filter... – .

Column 15, line 8 reads "...existence (or lack thereof of disturber noise resulting from a ..." and should read – ...existence (or lack thereof) of disturber noise resulting from a ... – .

Column 16, line 2 reads "...based upon the parameters that setup the equalizer." and should read – ...based upon the parameters that set up the equalizer. – .

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DATED : December 20, 2005

INVENTOR(S) : Mark Alan Erickson, Ioannis Kanellakopoulos, John Josef Hench, Sunil C. Shah, James W. Waite, Michail Tsatsanis, and Gurcan Aral

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 17, line 43 reads "...DSLAMS it has control over. The NMA 718 performs a..." and should read - ...DSLAMs it has control over. The NMA 718 performs a... -.

Column 18, lines 29-30 read, "...of all diagnosed out-of-domain and in-domain disturbers disturbers and victims that are estimated to be in a given..." and should read - ...of all diagnosed out-of-domain and in-domain disturbers and victims that are estimated to be in a given... -.

Column 18, lines 44-45 reads, "...as a whole. For example, referring to FIG. 8, if a description 801 of the disturber sources observed at a line are sent..." and should read - ...as a whole. For example, referring to FIG. 8, if a description 801 of the disturber sources observed at a line is sent... -.

Column 18, line 66 reads, "...each report identical disturber information that match the ..." and should read - ...each report identical disturber information that matches the ...-.

Column 19, line 29 reads, "...NMA may also describe "out-of domain" disturbers. Thus,..." and should read - "...NMA may also describe "out-of-domain" disturbers. Thus,... -.

Column 19, line 40 reads, "...due to regions of overlapping and non overlapping frequency..." and should read - ...due to regions of overlapping and non-overlapping frequency... -.

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PATENT NO. : 6,978,015 *BI*

DATED : December 20, 2005

INVENTOR(S) : Mark Alan Erickson, Ioannis Kanellakopoulos, John Josef Hench, Sunil C. Shah, James W. Waite, Michail Tsatsanis, and Gurcan Aral

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 19, line 54 reads, "...non volatile memory within a CPE, additional DSL network..." and should read – ...non-volatile memory within a CPE, additional DSL network... –.

Column 19, lines 57-58 reads, "...an effective non volatile storage unit. That is, a CPE without non volatile storage will lose it's line level understanding if..." and should read – ...an effective non-volatile storage unit. That is, a CPE without non-volatile storage will lose it's line level understanding if... –.

Column 20, line 51 reads, "...developed, etc. The results of any these analyses will take..." and should read – ...developed, etc. The results of any of these analyses will take...–.

Column 20, line 67 reads, "...reduced time spent during training the training period)." and should read – ...reduced time spent during the training period). –.

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